Gulf of Mexico Harmful Algal Bloom Bulletin

22 December 2004

National Ocean Service

National Environmental Satellite, Data, and Information Service

Last bulletin: December 20, 2004

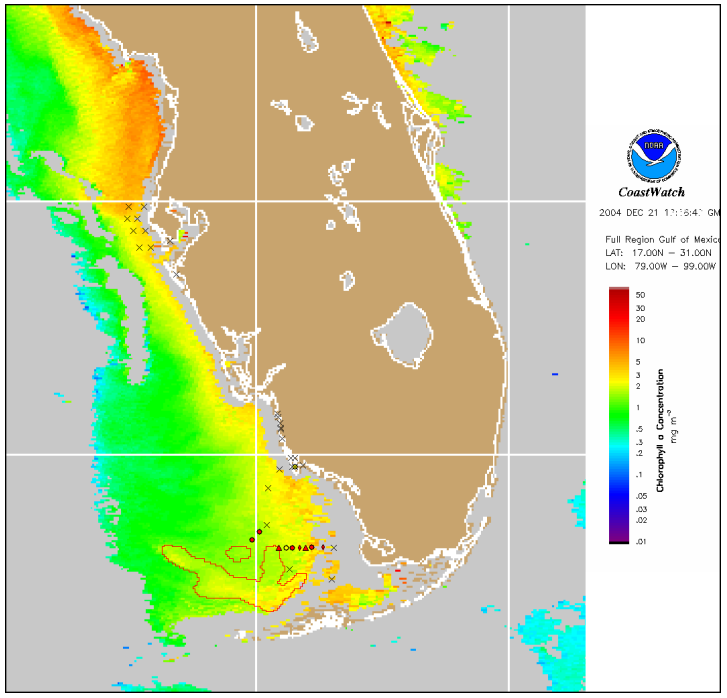
Conditions: A harmful algal bloom has been identified offshore southwest of Cape Sable and north of the Keys. Impacts on shore are unlikely through Friday.

Analysis: Continued cloudy imagery makes determination of the southern and eastern extents of the existing HAB difficult. The northwest tip of the bloom lies at approximately 25°14'N 82°47'W, with a center point at approximately 24° 54'N 82°10'W. It extends from 82°47'W east to at least 81°38'W. Chlorophyll concentrations are higher on the eastern side of the bloom, over 4μg/L, but 2-3μg/L on the eastern edge. The bloom is still quite large, with medium concentrations of both Karenia brevis and Rhizosolenia according to samples from December 13-18. East to southeast winds through Thursday should minimize coastal impacts. Variable winds through the weekend favor maintenance of the current bloom location.

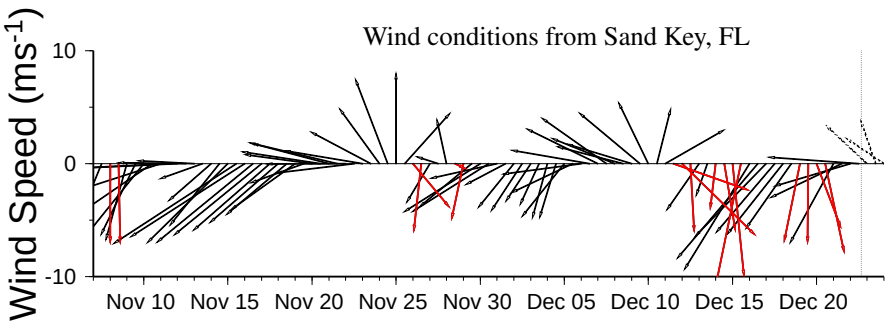
Very low levels of Karenia were found from Venice to Boca Grande. This is not associated with a feature detected by imagery. Variable winds make impacts unlikely at the coast through the weekend.

A large feature of elevated chlorophyll extends south from Cedar Key to Clearwater. This is not likely to be an HAB, but discolored water is possible in the area.

-Stolz and Fenstermacher



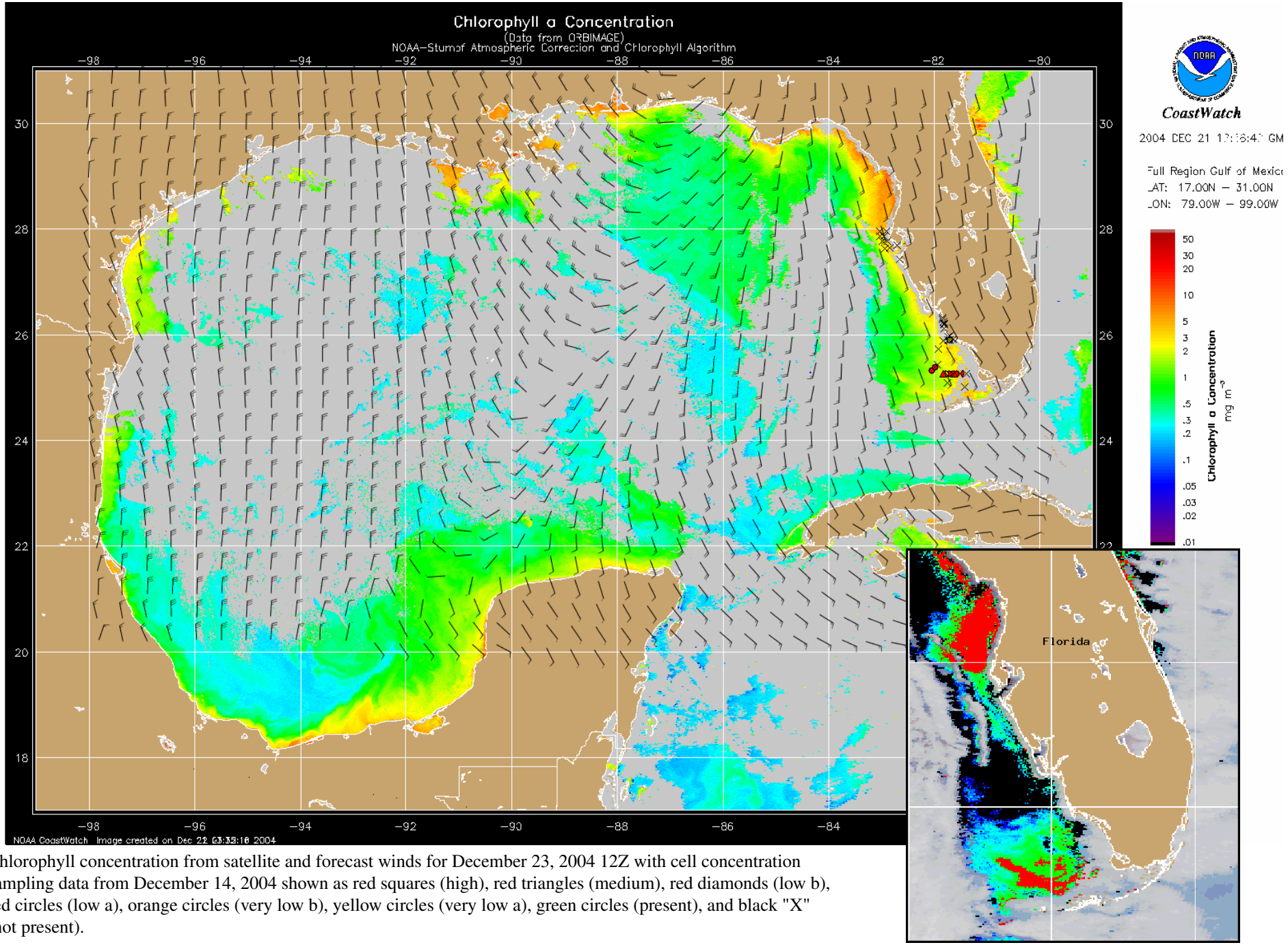
Chlorophyll concentration from satellite with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 14, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).



Wind speed and direction are averaged over 12 hours from measurements made on buoys. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

Florida Keys: East to southeast winds through Wednesday, becoming south Thursday. Variable winds Friday and Saturday will become northeast to east by Sunday. Winds 10-15 knots (5-7 m/s) through the weekend.

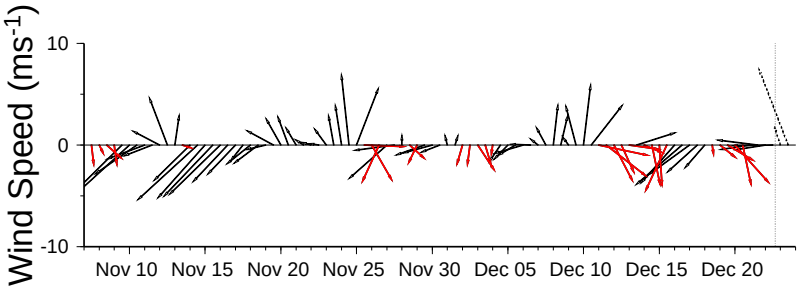
Cedar Key: Southeast winds ranging to southwest at 15-20 knots (7-10 m/s) will become north to northeast Thursday and through the weekend.



Chlorophyll concentration from satellite and forecast winds for December 23, 2004 12Z with cell concentration sampling data from December 14, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).

Blooms shown in red (see p. 1 analysis and image for interpretation)

Wind conditions from Cedar Key, FL



Wind conditions from Venice Pier, FL